

A nozzles which are in communication with the second connection line and extend toward the inner side surface of the reactor block to spray the second reaction gas and/or inert gas toward edges of the wafer.--

IN THE CLAIMS

Claims 1-8, 10-11, and 13-14 are presented as follows in re-written "clean" format.

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--1. (Amended) A thin film deposition reactor comprising:
a reactor block on which a wafer is placed;
a shower head plate for uniformly maintaining a predetermined pressure by covering the reactor block;
a wafer block installed in the reactor block, on which the wafer is to be seated;
an exhausting portion connected to the reactor block for exhausting a gas from the reactor block;
a first connection line in communication with the shower head plate, through which a first reaction gas and/or inert gas flow;
a second connection line in communication with the shower head plate, through which a second reaction gas and/or inert gas flow; and
a diffusion plate mounted on a lower surface of the shower head plate, the diffusion plate having a plurality of spray holes which are in communication with the first connection line and face the upper surface of the wafer to spray the first reaction gas and/or inert gas onto the wafer, and a plurality of nozzles which are in communication with the second connection line and extend toward the inner side surface of the reactor block to spray the second reaction gas and/or inert gas toward edges of the wafer.--

--2. (Amended) The thin film deposition reactor of claim 1, wherein the diffusion plate has a lower surface of a concave form.--

--3. (Amended) The thin film deposition reactor of claim 1, wherein the diffusion plate has a lower surface of a convex form.--

--4. (Amended) The thin film deposition reactor of claim 1, wherein the diffusion plate further comprises a first diffusion plate in communication with the plurality of spray holes and the first connection line, and a second diffusion plate in communication with the plurality of nozzles and the second connection line.--

--5. (Amended) The thin film deposition reactor of claim 1, further comprising a first mixing portion at a center of the inside of the diffusion plate for mixing the first reaction gas and the inert gas and diffusing the mixture to the spray hole.--

--6. (Amended) The thin film deposition reactor of claim 1, further comprising a second mixing portion between the second connection line and the shower head plate for mixing the second reaction gas and the inert gas, the second mixing portion having an auxiliary diffusion plate in which holes are formed.--

--7. (Amended) The thin film deposition reactor of claim 1, wherein an area of the diffusion plate on which the spray holes are formed is larger than the wafer.--

--8. (Amended) The thin film deposition reactor of claim 1, wherein the diameter of each of the spray holes is 1 to 2.5 mm.--

--10. (Amended) The thin film deposition reactor of claim 9, wherein the spray hole comprises an upper end and a lower end, and the upper end has a diameter larger than that of the lower end so that thermal energy from the wafer block is evenly transferred to the shower head plate to prevent the diffusion plate from being overheated.-

--11. (Amended) The thin film deposition reactor of claim 10, wherein the diffusion plate has a thickness of at least 5mm to prevent the diffusion plate from being bent at a high temperature.--

--13 [(Amended)] The thin film deposition reactor of claim 1, wherein a distance between the diffusion plate and the wafer block is 20 to 50mm.--

A4 --14 [(Amended)] The thin film deposition reactor of claim 1, further comprising a pumping baffle which is installed on the outer circumference of the wafer block, the pumping baffle comprising a sidewall placed around the lateral side of the wafer block, a bottom wall extended outward from a lower end of the sidewall, and holes formed in the bottom wall.--

Please enter the following newly added claims.

AS 15 [(Newly Added)] The thin film deposition reactor of claim 10, wherein the spray hole further comprises a step between the upper end and the lower end.

16 [(Newly Added)] The thin film deposition reactor of claim 4, wherein the first diffusion plate has a thickness of at least 5mm.

17 [(Newly Added)] The thin film deposition reactor of claim 14, wherein the holes are symmetrically arranged.

IN THE ABSTRACT

Please replace the Abstract with the following rewritten, amended Abstract.

A6 --A thin film deposition reactor including a reactor block on which a wafer is placed, a shower head plate for uniformly maintaining a predetermined pressure by covering the reactor block, a wafer block installed in the reactor block, on which the wafer is to be seated; an exhausting portion connected to the reactor block for exhausting a gas from the reactor block; a first connection line in communication with the shower head plate, through which a first reaction gas and/or inert gas flow, a second connection line in communication with the shower head plate, through which a second reaction gas and/or inert gas flow, and a diffusion plate mounted on a lower surface of the shower head plate. The diffusion plate has a plurality of spray holes which are in communication with the first connection line and face the upper surface of the wafer to spray the first

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reaction gas and/or inert gas onto the wafer, and a plurality of nozzles which are in communication with the second connection line and extend toward the inner side surface of the reactor block to spray the second reaction gas and/or inert gas toward edges of the wafer.--

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